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ABSTRACT

Leadership styles based on Bass's model of transformational and transactional leadership are explored in this report. Questionnaires were administered to staff and faculty at 45 private secondary schools in the southeast United States to determine the headmasters' leadership qualities. Factors of transformational leadership include charisma, individualized consideration, and intellectual stimulation; transactional leadership involves contingent reward and management-by-exception. Findings indicate that the transformational and transactional factors identified in other studies of business supervisors were replicated in the population of private secondary school headmasters. Also, perceptions of headmaster effectiveness and satisfaction with the headmaster were more positively correlated with transformational than with transactional leadership. Outcomes that differed from previous studies, however, indicate a broader definition of "charisma" due to its overlapping components and the identification of the two separate factors of leadership as second-order factors. The headmasters were less concerned than business supervisors with emotional support and intellectual stimulation of their staff relationships; however, both business and educational settings practiced individual attention, contingent rewards, and management-by-exception. Twelve tables are included. (23 references) (LMI)

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Transformational and Transactional Leadership:

An Empirical Test of a Theory

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Abstract

In 1985, Bernard Bass proposed a new model of leadership, based on the work of James MacGregor Burns, in which he described leaders as transformational or transactional. Bass theorized that there is a certain kind of leader who is capable of inspiring subordinates to heights they never intended to achieve. He referred to this leader as transformational. The transactional leader, on the other hand, is rooted in two-way influence: a social exchange in which the leader gives something and gets something in return. In his initial work, Bass identified three factors of transformational leadership (Charisma, Individualized Consideration, and Intellectual Stimulation), and two factors of transactional leadership (Contingent Reward and Management-by-Exception). In later research, Management-by-Exception was further divided into active and passive dimensions.

In this study, headmasters at 45 private secondary schools in the southeastern United States were used as subjects in determining whether a similar leadership model would emerge as that found by Bass and others who used Army officers and supervisors in business as their subjects.

In a principal component factor analysis, the same transformational and transactional factors emerged from school population as had been found in Bass' original research. However, Factor 1, Charisma, was found to include more than simply "charisma" items, suggesting that the concept should be reexamined. A comparison of this factor analysis with two others which had used supervisors in business rather than education found some differences in leader-subordinate relationships, but these differences did not affect the model as a whole.

Leadership theory has been in a state of ferment for decades. Proposed theories have been based upon the structure of the organization, the needs of the people who work within the organization, the environment in which the organization resides, or the particular situation faced by the leader. Leaders have been classified as authoritarian or participative, task- or relationship-oriented, integrated or separated (Stogdill, 1974).

Often these theories of leadership provided a framework for examining how skillful a leader is at promoting change. Maybe the change was to more efficiency, to greater worker satisfaction, to greater productivity, to decreased conflict, or to some other goal desired by the organization. But it may be said that these leadership theories have generally judged the worth of a leader upon his or her ability to take the organization from Point A to Point B.

In his 1985 book Leadership and Performance Beyond Expectations, Bernard Bass developed a new leadership theory based upon the work of James MacGregor Burns (1978). Bass' theory centered upon higher-order change in both effort and performance of workers, while traditional theory centers on first-order changes. Bass theorized that there is a certain kind of leader who is capable of going beyond first-order change to higher-order change and who inspires people to heights they never intended to achieve. He refers to this leader as transformational (Bass, 1985).

Hollander (1978a) was the first to use the term "transactional leadership." He defined leadership as two-way influence: a social exchange in which both the leader and follower give something and get something in return (Hollander, 1978b). Transactional leadership has its basis in reinforcement theory, i.e., both parties agree to what is to be done in order to receive

reward or to avoid punishment. The work to receive reward or avoid punishment system is a transaction. The transactional processes discussed in The One Minute Manager (Blanchard & Johnson, 1982) are a case in point: (a) Set goals; (b) Clarify performance standards; (c) Tell inexperienced workers what they did right and encourage more of it; (d) Tell experienced workers what they did wrong, but reassure their value as persons. In essence, the entire leader-worker relationship is based on a mutual system of reinforcement.

"The manager-by-exception" is also a transactional leader. As long as performance standards are met, the leader remains uninvolved. It is only when performance falls below an agreed upon minimum that the leader intervenes. The intervention is then often negative (Bass, 1985). Management-by-exception was defined by Bittel (1964) as a system of identification and communication that signals the manager when his attention is needed: he remains silent when no attention is needed. This leadership approach was based upon the scientific management theory of Frederick Taylor (1911) and was designed to save executive time and focus highly-paid people on high-return work.

Bass contended that subordinate motivation to work cannot be accounted for by a simple exchange of material or psychological rewards for satisfactory service; while such an exchange is apparent, it does not account for a considerable portion of the relationship between leaders and subordinates. Therefore, he began to search for a broader view of leadership.

Psychological theory provided a basis for this search. According to Maslow's (1954) theory of human motivation, people have a hierarchy of needs. In ascending order, they are physiological needs, safety needs, love needs, esteem needs, and the need for self-actualization. It is the contention of Bass that some leaders exist who motivate workers far beyond the lower levels

of Maslow's hierarchy and into the levels of self-actualization. They are the leaders described by Zaleznik (1977) who separated leaders from managers. According to Zaleznik, managers are impersonal, they limit options, they relate to people according to their organizational roles, and they depend upon their own roles for their identities. Leaders, on the other hand, are personal and active, projecting ideas into exciting images and developing options. They relate to others empathetically and intuitively, and they feel separate enough from their environments to depend on a mastery of events for their identities. Bass stated that the leadership literature has not dealt fully with this leader whose capacities cannot be explained by "carrot-and stick" formulations of exchange theory, calling such a leader "transformational."

Bass' transformational leader is not satisfied with the meeting of some minimum standard, which could become the maximum. Rather, the transformational leader is someone who motivates workers to go beyond organizational expectations of performance. This is achieved by (a) raising the level of consciousness about the value and importance of outcomes, (b) by encouraging transcendence of members' self-interest for that of the sake of the group, or (c) by altering the need levels of the group members.

The Scope of This Investigation

In Leadership and Performance Beyond Expectations (1985) Bass described transformational and transactional leaders. In validating his model, he used the data from 104 military officers who had completed his Leadership Questionnaire describing their superiors. As a result of a principal components factor analysis, five factors emerged. Factors that Bass called Transformational included Charismatic Leadership, Individualized Consideration, and Intellectual Stimulation. Factors that Bass called Transactional included

Contingent Reward and Management-by-Exception. Data were subsequently subjected to a higher-order factor analysis from which two second order factors emerged: Active-Proactive (taking steps when necessary) and Passive-Reactive (adoption of a "wait and see" attitude).

Coincidental with the present study, a new version of the Leadership Questionnaire had been developed and was in use by Bass and other researchers. By agreement with Bass, the new instrument, the Multifactor Leadership Questionnaire, Form 5 (MLQ-5), was used in this study. Two factor analyses using the instrument had already been performed (Bass & Hater, 1985; Seltzer, 1985), and these analyses were available for comparison with the present work. The subjects in the Bass and Hater (1985) study were supervisors in a corporation specializing in express delivery of goods and information while the Seltzer (1985) subjects were students in a Master of Business Administration (MBA) program.

Hypothesis

The research question central to the present study was "Will the same transformational and transactional factors found among military or business leaders appear among secondary school headmasters?" It was predicted that this would be the case. Specifically, it was hypothesized that a factor analysis of the responses of subordinates of headmasters of private secondary schools who completed the Multifactor Leadership Questionnaire, Form 5, would yield the three Transformational factors of Charisma, Individualized Consideration, and Intellectual Stimulation, and the Transactional factors of Contingent Reward and Management-by-Exception.

Definition of Terms

Transformational leadership motivates followers to do more than they

originally expected to do, by raising their level of awareness, by getting them to transcend their own self-interest, or by altering their need levels (Bass, 1985).

Transactional leadership recognizes what the follower needs and clarifies for the follower how these needs will be fulfilled in exchange for the follower's satisfactory effort and performance (Bass, 1985).

Charisma inspires in the followers unquestioning loyalty and devotion without regard to their own self-interest (Bass, 1985).

Individualized consideration is individualized attention and a developmental or mentoring orientation toward subordinates (Bass, 1985).

Intellectual stimulation is the arousal and change in followers of problem awareness and problem solving, of thought and imagination, and of beliefs and values (Bass, 1985).

Contingent reward is an agreement between the leader and follower on what the follower needs to do to be rewarded (Bass, 1985).

Active management-by-exception maintains a vigilance for mistakes or deviations and takes action if targets are not met (Bass & Hater, 1985).

Passive management-by-exception preserves the status quo and does not consider trying to make improvements as long as things are going along all right or according to earlier plans (Bass & Hater, 1985).

Method

Subjects

The leadership subjects for this study were headmasters or principals of private secondary schools in the southeastern United States. All schools identified were members of the Southeastern Association of Independent Schools (SAIS). States where SAIS member schools are located include Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. A random selection of 100 schools was made from the SAIS membership directory. This step produced a list which included member schools from each SAIS state except Kentucky. From a list of teachers and staff supplied by schools which agreed to participate, a random selection of five subordinates was made who then were asked to complete the Multifactor Leadership Questionnaire, Form 5 (MLQ-5). Of the 45 schools from which personnel responded, 29% were from Georgia, 15% were from Tennessee, 13% were from Florida, 8% were from Alabama, 7% were from South Carolina, 3% were from each of Virginia and Texas, and 2% were from North Carolina. Sixteen percent of the schools included in the study were parochial.

Instrumentation

The instrument used in the study was the Bass Multifactor Leadership Questionnaire, Form 5 (MLQ-5). The first 70 items consisted of descriptive statements about superiors. Respondents were instructed to "judge how frequently your current immediate superior . . . has displayed the behavior" in each item. Items had a five-step scale, ranging from "Frequently, if not always" to "Not at all." In one item, for example, a subject judged how frequently the superior "makes me feel good to be around him/her."

Items 71 through 74 collected demographic information items (e.g., gender

of respondent, age of respondent). These were not used in this study. Items 75 through 78 were four items related to the perceived effectiveness of the person being rated. For these four items, subjects used a five-step scale, ranging from "Extremely Effective" to "Not Effective." For example, superiors (headmasters) were rated on how effective they were in "meeting the requirements of the organization." Items 79 and 80 related to how satisfied the respondent was with the person being rated. For these two items, subjects used a five-step scale, ranging from "Very Satisfied" to "Very Dissatisfied." For example, subjects had to rate "In all, how satisfied are you with your superior?"

Responses to the four items pertaining to effectiveness (77 to 78) were summed to create an effectiveness score. Similarly, responses to the two satisfaction items (79 and 80) were summed to create a satisfaction score. Thus, measures of the perceived effectiveness of the leader and the subjects' satisfaction with the leader could be related to data from the initial 70 items of the instrument.

Procedures

During Fall, 1986, and Spring, 1987, questionnaires were distributed and collected from staff and faculty members of the 45 schools which had agreed to participate. After the initial mailing resulted in only a 46% return rate, a follow-up postcard was sent as a reminder. This step produced an additional 21% return, for a total response rate of 67% (151 questionnaires).

Results

There is no consensus on the number of cases (respondents) necessary to complete a viable factor analysis. Cattell (1952) suggested a 4-to-1 ratio e.g., 40 cases for 10 variables. Bass (1985) discussed the need for a 6-to-1 ratio. Gorsuch (1974) stated it simply: the more the better. Rummel (1970) stated that this question is a matter of research taste and until some ratio is clearly defined, two rules should apply: (a) the number of cases must exceed the number of variables, and (b) the ratio of cases to variables should be as large as is practical. Therefore, a decision was made that the ratio of cases to variables in this study, 2-to-1, was acceptable.

Analysis of the MLQ-5 data by principal components factor analysis yielded 16 factors with an eigenvalue greater than the standard value of 1.00 (Kaiser, 1960). When the eigenvalue for a factor is divided by the total number of variables being factored, and the answer multiplied by 100, the result is the percentage of variance explained by the factor (Kim & Mueller, 1978). In this study, the first factor accounted for, by far, the largest percentage of variance of the factors retained. The later factors in this study had only one or two items loading on them and thus were ignored (Gorsuch, 1974; Rummel, 1970).

The two factor analyses of the MLQ version 5 with which this one will be compared (Bass & Hater, 1985; Seltzer, 1985) had used rotations of 12 factors. In this study, varimax rotation was performed with 12 factors which, in total, accounted for 65.9% of the variance in the ratings.

An examination of the rotated factor loadings revealed the emergence of six factors similar to those that had been previously identified by researchers who used the instrument. Furthermore, these six factors accounted for a total of

54% of the variance in the MLQ-5 items. Factors beyond these six had very few items loading on them and accounted for little variance and thus were dropped from interpretation (Kim & Mueller, 1978).

Factor 1 - Charismatic Leadership. Items previously identified by Bass (Bass & Hater, 1985) as measuring charismatic leadership behavior loaded high on the first factor extracted in this study, as shown in Table 1. Factor 1 was unquestionably the most important factor in explaining variance in MLQ-5 ratings of private school headmasters. Of the 70 items in the instrument, 30 of them had positive loadings above .40 on the factor. It accounted for 33.1% of the variance in ratings. Those items that were most related to the factor--only those with loadings above .58--were included in Table 1. An examination of the items in the table shows that this factor could be characterized by the term "charisma."

Table 1

Factor 1 - Charisma

Loading on Factor 1	Item Number	Item
.80	31	Has a sense of mission which he/she transmits to me
.77	33	I am ready to trust him/her to overcome any obstacle
.77	26	In my mind, he/she is a symbol of success and accomplishment
.76	32	Increases my optimism for the future
.76	51	We go faster, higher and farther in reaching objectives because of him/her
.75	28	Has my respect
.74	50	gets to the heart of complex problems quickly
.70	29	Makes me enthusiastic about assignments
.69	13	I have complete faith in him/her
.69	40	Arouses in me the effort to work harder and better
.67	10	Makes me proud to be associated with him/her
.67	57	heightens my motivation to succeed
.59	21	Has special gift of seeing what it is that is really important for me to consider

Some items related to intellectual stimulation loaded on this factor; however, only one of those items, number 50, "gets to the heart of complex problems quickly," loaded above .50. Therefore, this factor cannot be considered to be highly characterized by intellectual stimulation

(Cattell, 1952; Nunnally, 1967). The same was true for several items measuring inspirational leadership and extra effort which also loaded on this factor. Due to the presence of these "non-charisma" items, however, an additional analysis of the items constituting Factor 1 was subsequently performed and will be described in a later section.

Factor 2 - Individualized Consideration. Items identified by Bass (Bass & Hater, 1985) as measuring Individualized Consideration loaded highly on this factor, as shown in Table 2. Factor 2, which accounted for 6.6% of the variance, had 16 items with positive loadings above .40. As with the previous factor, only loadings above .58 were included in the table. Items loading highly on this factor were characterized by individual attention to subordinates.

Table 2

Factor 2 - Individualized Consideration

Loading on Factor 2	Item Number	Item
.74	15	Lets me know how well I am doing
.69	3	Gives personal attention to subordinates who seem neglected
.69	16	Treats each subordinate as an individual
.66	48	Spends a lot of time coaching each individual subordinate who needs it
.64	27	I can count on him/her to express appreciation when I do a good job
.60	66	Gives newcomers a lot of help
.59	8	Delegates responsibilities to me to provide me with learning opportunities

Factor 3 - Intellectual Stimulation. Items identified by Bass (Bass & Hater, 1985) as measuring intellectual stimulation loaded highly on this third factor, as shown in Table 3. The loadings included in this table were the only ones on the factor which were above .50; thus the factor was very well encompassed by these items. Factor 3 accounted for 4.9% of the variance, and was clearly made up of items which involve intellectual leadership.

Table 3

Factor 3 - Intellectual Stimulation

Loading on Factor 3	Item Number	Item
.66	44	Requires that I back up my opinions with good reasoning
.63	62	Makes sure that I think through what is involved before taking actions
.53	39	Stresses the use of intelligence to overcome obstacles
.53	68	Gets me to use reasoning and evidence, rather than unsupported opinion

Factor 4 - Contingent Reward. Items identified by Bass (Bass & Hater, 1985) as measuring contingent reward behaviors loaded highly on this factor, shown in Table 4. Included in this table were loadings which were above .50 for an item. As with the previous factor, these items well-defined the factor: almost all the other loadings were near zero. Factor 4 accounted for 3.7% of the variance. Items which loaded highly on this factor were recognized as similar to those described in Blanchard and Johnson's (1982) The One Minute Manager.

Table 4

Factor 4 - Contingent Reward

Loading on Factor 4	Item Number	Item
.73	42	Arranges that I get what I want in exchange for my efforts
.72	47	I can get what I want if I work as agreed with him/her
.66	20	Gives me what I want in exchange for my showing support for him/her
.52	53	I have an agreement with him/her about what I will get for doing what needs to be done

Factor 5 - Passive Management-by-Exception. Items identified by Bass (Bass & Hater, 1985) as measuring passive management-by-exception loaded highly on this factor, as shown in Table 5. Included in this table are the four items that had loadings above .50. Factor 5 accounted for 2.9% of the variance. Items loaded highly on this factor described leaders who wait for a failure before any action is taken.

Table 5

Factor 5 - Management-By-Exception (Passive)

Loading on Factor 5	Item Number	Item
.77	34	Shows he/she is a firm believer in "if it ain't broken, don't fix it"
.74	17	Does not try to change anything as long as things are going all right
.65	49	As long as things are going according to earlier plans, he/she does not consider trying to make improvements
.59	23	Is satisfied with my performance as long as the old ways work

Factor 6 - Active Management-by-Exception. Items identified by Bass (Bass & Hater, 1985) as measuring active management-by-exception loaded highly on this factor, as shown in Table 6. Loadings included in this table were those above .47. Factor 6 accounted for 2.7% of the variance. This factor was characterized by items which described leaders who actively seek irregularities for corrective action.

Table 6

Factor 6 - Management-By-Exception (Active)

Loading on Factor 6	Item Number	Item
.74	61	Concentrates his/her attention on failures to meet quality or standards
.74	43	Focuses attention on irregularities, mistakes, exceptions and deviations from what is expected of me
.47	55	Takes corrective action if I make mistakes

Extra Effort and Inspiration

Several items measured "extra effort," the extent to which the leader elicited unusual effort from subordinates; and several items measured "inspiration," the extent to which the leader was inspiring. Extra effort items did not cluster on one factor but were scattered, not allowing for a clear correlation of these items, either with each other, or with given factors.

Items measuring inspiration tended to load on Factor 1 (Charisma), but some of the items loaded on factors that were unable to be identified, and therefore

could not be interpreted. The inspiration items which had loadings above .40 on Factor 1 were items 24, 40, 51, 63, and 69.

Item 24	Without his/her vision of what lies ahead, I would find it difficult, if not impossible, to get very far
Item 40	Arouses in me the effort to work harder and better
Item 51	We go faster/higher or farther in reaching objectives because of him/her
Item 63	Gives us "pep" talks
Item 69	Stimulates my efforts to excel

Inspiration is clearly a subset of the charisma factor as described by Bass (1985). These results supported the notion that "charisma" and "inspirational leadership" cannot be effectively separated.

Comparison with Other Factor Analyses

A comparison was made of the factors obtained in this study with those emerging in two other studies. The Bass and Hater (1985) and Seltzer (1985) analyses were considered together since their respondents' orientations were leadership in business, while the current study focused on leadership in education. Comparisons consisted of comparing and contrasting both the factors that were extracted and the item loadings on the factors.

All three studies were in substantial agreement. While they were not completely identical, results were similar enough to support the hypothesis that the leadership factors identified in a business context were viable in describing the secondary school headmasters that were rated in this study. Table 7 gives a summary of the factors that were obtained in the studies (the column labeled Hoover pertains to the present study). The six factors described in the previous section were obtained in all three studies. However, two factors were obtained in previous research that were not obtained in this

study: (a) Bass and Hater (1985) identified a factor called Inspirational Leadership; (b) both Bass and Hater (1985) and Seltzer (1985) identified a factor called Laissez-Faire Leadership.

Table 7

Factors Obtained in Three Studies Using the Multifactor Leadership Questionnaire, Form 5 (MLQ-5)

	Study		
Factor	Bass & Hater (FA1)	Seltzer (FA2)	Hoover (FA3)
Charisma	Y	Y	Y
Individual consideration	Y	Y	Y
Intellectual stimulation	Y	Y	Y
Inspirational leadership	Y	N	N
Contingent reward	Y	Y	Y
Management by exception (passive)	Y	Y	Y
Management by exception (active)	Y	Y	Y
Laissez faire leadership	Y	Y	N

Note. Y means that the factor was obtained; N means that the factor was not obtained.

Some comparisons among the three studies are presented below, however, the reader should consult Hoover (1987/1988) for a comprehensive discussion of

comparisons among the three studies. Since Cattell (1952) considers a loading under .50 to be low and a loading above .70 to be high, the criterion for differences in loadings between this study (Factor Analysis 3 or FA3), and Bass and Hater (Factor Analysis 1 or FA1) and Seltzer (Factor Analysis 2 or FA2) taken together, was set at .20. If a factor loading for an MLQ-5 item in the present study was .20 or more greater than the loadings for both the other studies, then the item was assumed to be more related to the factor than it was for the other studies. Similarly, if a factor loading for an MLQ-5 item in the present study was .20 or less than the loadings for both the other studies, then the item was assumed to be less related to the factor than it was for the other studies.

Table 8 shows a comparison of loadings for items in the Charisma factor. For each item, the loadings are given for the key defining items on the factor as were obtained by Bass and Hater (1985) (FA1), by Seltzer (1985) (FA2), and in the present study, labeled Hoover (FA3). Comparison of the loadings indicate that a factor called "charisma" emerged in all three analyses.

Item 1, "Makes me feel good to be around him/her," is the only item which loaded lower in this study than it did in the other two. This may have occurred because educational institutions tend to be loosely coupled and the people who work within them are not as dependent upon superiors for emotional support as they might be in other organizations. Educators consider themselves professionals, and as such, may act independently from each other and their superiors. They may not need emotional support as much as they need intellectual stimulation, for example.

Table 8

Comparison of Item Loadings For Factor 1 - Charisma

	Items	Bass & Hater (FA1)	Seltzer (FA2)	Hoover (FA3)
1	Makes me feel good to be around him/her	.72	.73	.53[a]
10	Makes be proud to be associated with him/her	.83	.82	.67
13	I have complete faith in him/her	.81	.76	.69
21	has the special gift of seeing what it is that is really important for me to consider	.71	.56	.59
26	In my mind, he/she is a symbol of success and accomplishment	.75	.80	.77
28	Has my respect	.78	.81	.75
29	Makes me enthusiastic about assignments	.79	.76	.70
31	Has a sense of mission which he/she transmits to me	.66	.68	.80
32	Increases my optimism for the future	.74	.75	.76
33	I am ready to trust him/her to overcome any obstacle	.81	.73	.77

[a]Indicates a loading different from both of the other two.

Table 9 presents a comparisons for the factor called Individualized Consideration. It clearly emerged as a factor in all three analyses. Items measuring individualized consideration used terms such as "personal attention," "delegation," "appreciation," "coaching," "advice," "teacher," "help," etc. The comparative similarity of loadings indicated that leaders' individual attention to subordinates is important in both schools and businesses.

Table 9

Comparison of Item Loadings For Factor 2 - Individualized Consideration

	Items	Bass & Hater (FA1)	Seltzer (FA2)	Hoover (FA3)
3	Gives personal attention to subordinates who seem neglected	.68	.54	.69
8	Delegates responsibilities to me to provide me with learning opportunities	.45	.30	.59
15	Lets me know how well I am doing	.63	.38	.74
16	Treats each subordinate as an individual	.53	.56	.69
25	Finds out what I want and helps me to get it	.56	.48	.45
27	I can count on him/her to express his/her appreciation when I do a good job	.76	.54	.64
48	Spends a lot of time coaching each individual subordinate who needs it	.60	.65	.66
54	Provides advice to me if I need it	.70	.47	.41
60	Is ready to serve as my teacher or coach whenever needed	.70	.51	.47
66	Give newcomers a lot of help	.72	.53	.60

Table 10 shows loadings for Factor 3--Intellectual Stimulation. Intellectual stimulation emerged as a factor in all three analyses. Item 5, "His/her ideas have forced me to rethink some of my own ideas which I had never questioned before," and item 35, "Provides me with reasons to change the way I think about problems," had smaller loadings in this study than they did in the other two.

Since the "product" of schools falls within the realm of intellectual activity, interpreting these differences was difficult to do. It was difficult

to know whether teachers answered these questions in terms of their teaching activities or in terms of organizational issues. However, for the purposes of argument, if it were assumed that teachers were answering in terms of teaching ideas and classroom problems, it could be speculated that the ongoing debate of whether principals are primarily managers or instructional leaders was illustrated. It may be that teachers exercise their professional judgment and autonomy in instructional matters, and thus do not associate the headmaster's rating on these items with intellectual stimulation.

Table 10

Comparison of Item Loadings For Factor 3: Intellectual Stimulation

	Items	Bass & Hater (FA1)	Seltzer (FA2)	Hoover (FA3)
5	His/her ideas have forced me to rethink some of my own ideas that I had never questioned before	.69	.72	.15[a]
12	enables me to think about old problems in new ways	.32	.26	.21
19	provides me with new ways of looking at things that used to be a puzzle	.42	.56	.36
35	provides me with reasons to change the way I think about problems	.53	.59	.22[a]
39	Stresses the use of intelligence to overcome obstacles	.10	.55	.53
44	Requires that I back up my opinions with good reasoning	.32	.68	.66
50	Gets to the heart of complex problems quickly	.09	.42	.18
56	Places heavy emphasis on careful problem-solving before taking action	.20	.63	.44
62	Makes sure I think through what is involved before taking actions	.19	.71	.63
68	Gets me to use reasoning and evidence rather than unsupported opinion	.25	.73	.53

[a]Indicates a loading different from both of the other two.

Other Factors

Factor 4 - Inspirational Leadership. Inspirational Leadership only emerged in Bass and Hater (1985) as a separate factor. In Seltzer (1985) and the present study, inspirational items were largely subsumed under Factor 1 and

inspiration was considered to be a subset of Charisma.

Factor 5 - Contingent Reward. Contingent Reward emerged as a factor in all three analyses. However, the loadings of two items in the present study were lower than those from the Bass and Hater (1985) and Seltzer (1985) studies.

Item 2, "Whenever I feel it necessary, I can negotiate with him/her for what I can get for what I accomplish," and item 59, "Points out what I will receive if I do what needs to be done," both address the issue of receiving rewards for agreed-upon performance, but more importantly, both items address the notion of "need." Answers to these items pointed out the differences in the organizational dynamics of businesses and schools. A greater level of autonomy and independence of teachers in schools may make these items less related to rewards than they are in a workplace environment.

Factor 6 - Active Management-by-Exception. This factor emerged in all three studies and the loadings were similar in all three. It appeared that the kind of behaviors described by the factor occur in both businesses and schools.

Factor 7 - Passive Management-by-Exception. Passive Management-by-Exception also emerged as a separate factor in all three studies. Item 4, "Is content to let me continue doing my job in the same way as always," however, loaded lower in the present study than the other two studies. This was probably not indicative of any definable pattern in private school leadership, since loadings on items worded very similarly were much higher.

Factor 8 - Laissez Faire Leadership. These factor loadings were not compared, since it did not emerge in the present study as a separate factor. Several items related to this concept did load on a factor, but the variance accounted for by that factor was too small to be considered important (1.7%). The term laissez faire leadership describes non-involvement by the leader in

the organization--"hands off" behavior that might be characterized as non-leadership. For example, item 46 of the MLQ-5 is "does not make much difference to my group's performance." Laissez faire leadership did not prove to be a useful construct in describing the secondary school headmasters in this study.

Reliability Test of Items in Factor 1

Items loading above .40 on Factor 1 included five items dealing with inspiration, two items dealing with individualized consideration; and two items dealing with extra effort put forth by subordinates. To more fully explore the meaning of the factor, an internal consistency reliability test was performed (Bentler, 1976; Nunnally, 1967). Such a test would reveal whether the items loading highly on Factor 1 were measuring the same construct. It was thought that perhaps Factor 1 was measuring something beyond charisma, or that the concept of charisma should be expanded.

Twenty-five items were included in the reliability analysis. In order to be included an item had to have met these criteria: (a) it must have loaded above .40 of factor 1 (the factor named Charisma), and (b) its loading on any other factor must not have exceeded the loading on factor 1. Included among the 25 items were all the 13 displayed in Table 1, i.e., those which were the core items in the factor. The SPSS-X program RELIABILITY was used for analysis.

Cronbach's alpha coefficient was .9481 for the 25 items, indicating a high degree of internal consistency reliablity for this set of items. Twenty of the 25 items had corrected item-total correlations above .60, suggesting that these items were indeed measuring the same thing.

When the items originally identified by Bass with Charisma were removed from the pool of 25 items, and the other items were examined, key words in those items included concepts such as "rethink," "change," "motivation," "action," "arouses," "coach," "pep," "stimulates," etc. These words, taken as a group, seemed to describe the motivational capacities of the leader. When combined with charisma items, and concepts such as "faith," "vision," "symbol," and "mission," it appeared that Factor 1 obtained in this study was actually describing something including charisma, but more similar to organizational patriotism. Factor 1 seemed to describe transformational leadership more generally than the more restrictive notion of charismatic leadership.

Higher-Order Factors

Higher order factor analysis is a data reduction technique which seeks to reduce factors into still fewer dimensions. It amounts to a factor analysis of a previous factor analysis. Bass (1985) performed higher-order factor analysis and found that the first-order factors he identified were described by two second-order factors: An Active-Proactive factor (Charisma, Individualized Consideration, Intellectual Stimulation, and Contingent Reward) and a Passive-Reactive factor (Management-by-Exception).

It was decided to subject the data from this study of headmasters to a similar analysis as that done by Bass. The SPSS-X program FACTOR was used. First, a principal components analysis with oblique rotation was performed to produce a matrix of factor correlations. The oblimin criterion was used with the suggested setting of zero for the delta parameter that controls the angle of rotation (Norusis, 1985). Then a factor analysis with varimax rotation was performed on data from the first-order factors in order to produce second-order factors.

Oblique rotation of factors does not always result in the same factor solution as orthogonal rotation. With these data, the oblique rotation solution resulted in one factor that best described Management-by-Exception. In general, it represented passive rather active Management-by-Exception. However, all the other first order factors that had been obtained with varimax rotation (Charisma, etc.) were obtained with oblimin rotation.

The higher order factors that emerged can be identified as transformational and transactional. As can be seen in Table 11, the first second order factor described the factors Charisma, Individualized Consideration and Intellectual Stimulation. Contingent Reward, identified by Bass (1985) as a transactional leadership behavior was clearly associated with the second factor. Management-by-Exception had a low positive loading on the Transactional factor and a high negative loading on the Transformational second-order factor.

Table 11

Loadings on Second-Order Factors

	Second-Order Factors	
First-Order Factors	1'	2'
	Transformational	Transactional
Charisma	.67	.20
Individualized consideration	.71	.19
Intellectual stimulation	.54	-.17
Contingent reward	.07	.77
Management-by-exception	-.63	.38

Effectiveness and Satisfaction

Items 75-78 of the MLQ-5 dealt with respondents' perceived effectiveness of the leader and items 79 and 80 with perceived satisfaction with the leader. The coefficient alpha for the four effectiveness items was .84, and it was .88 for the two satisfaction items. Given the relatively high degree of internal consistency obtained, indexes were created for effectiveness and satisfaction by summing respondent ratings.

The same first-order factor analysis was performed on the data as was previously reported, and then factor scores were created for each respondent. Table 12 shows the Pearson correlation coefficients among the six factor scores and the indexes of effectiveness and satisfaction.

Table 12

Correlation Between Factor Scores and Indexes of Leader Effectiveness and Satisfaction with Leader

Factor	Index	
	Effectiveness (n = 138)	Satisfaction (n = 146)
Transformational		
1. Charisma	.69**	.67**
2. Individualized Consideration	.39**	.45**
3. Intellectual Stimulation	.19*	.15
Transactional		
4. Contingent Reward	.05	.09
5. Management-by-Exception (passive)	-.05	.01
6. Management-by-Exception (active)	-.02	-.06

* $p < .05$, two-tailed test

** $p < .01$, two-tailed test

An examination of Table 12 reveals high positive correlations between the Charisma and perceived effectiveness and satisfaction (r = .69 and r = .67). Individualized Consideration correlated .39 and .45, while Intellectual Stimulation had correlations of .19 and .15. Only this last correlation was not statistically significant, using the .05 probability level.

The transactional factors correlated far less strongly with satisfaction and effectiveness. Contingent Reward correlated .05 and .09, Passive Management-by-Exception correlated -.05 and .01, while Active Management-by-Exception correlated negatively on both dimensions, -.02 and -.06. None of these correlations was statistically significant at the .05 level.

The findings obtained in this study are in general agreement with those reported by Bass (1985). Using an earlier version of the MLQ-5 instrument, Bass also correlated factor scores with effectiveness and satisfaction indexes. Bass obtained positive correlations between transformational factors and the two indexes (e.g., r = .85 for effectiveness and Charisma; r = .91 for satisfaction and Charisma). Also similar to this study, Bass found that scores on the indexes were not as highly correlated for transactional factors.

Conclusions

The hypothesis that the transformational and transactional factors emergent in other studies with groups of supervisors in businesses would reemerge in a population composed of headmasters of private secondary schools was supported. The identical transformational factors of Charisma, Individualized Consideration, and Intellectual Stimulation were found. The same transactional factors of Contingent Reward, Passive Management-by-Exception, and Active Management-by-Exception emerged. Therefore, the basis of the transformational and transactional leadership model was supported. The model was confirmed even though the subject sample was considerably different from those previously used by Bass (1985), Bass & Hater (1985), and Seltzer (1985).

It was found that Factor 1, which had been identified in three previous studies as charisma, might more appropriately be designated something else. Because so many items measuring constructs other than charisma were part of this factor, perhaps it should be known as something broader than charisma.

This study differed from the findings of Bass (1985) in the higher-order factor analysis. In Bass' higher-order analysis, the factors of Charisma, Individualized Consideration, Intellectual Stimulation, and Contingent Reward had clustered together to produce one factor, while Management-by-Exception had clustered on the other second-order factor. Bass called the first factor "active-proactive leadership," and the second one "passive-reactive leadership." In this study, however, Charisma, Individualized Consideration, and Intellectual Stimulation clustered on one factor, and Contingent Reward and Management-by-Exception clustered on the other. Therefore, the two separate factors of Transformational and Transactional leadership could be identified as

second-order factors in this study.

As in Bass' original study, satisfaction and effectiveness were found to be more highly correlated with transformational leadership than they were with transactional leadership. This study confirmed Bass' original findings on this point. The comparison of this factor analysis of responses of school personnel with two previous ones whose respondents were workers in businesses revealed some similarities and some differences.

Private school teachers were not as strong as workers in business as associating emotional support with charisma. Individual attention to subordinates emerged as important in both businesses and private schools. Compared to business subjects, teachers in private schools did not associate intellectual stimulation as much with the ability of the leader to change ideas. Contingent reward seems used in both businesses and private schools, but the teachers associated this less with negotiating to satisfy needs than with other items. Management-by-exception seemed to be equally practiced in both types of organizations.

Limitations of the Study

It should be noted that a halo effect may have occurred in this study. For example, a headmaster may have been rated high on all transformational items because he or she was charismatic, despite the fact that Charisma accounts for only one component of transformational leadership. Similarly, respondents' perceptions of headmaster effectiveness and satisfaction with the headmaster may have been biased based upon personal like or dislike of the headmaster. The possibility of such effects should be kept in mind as conclusions based on the study are considered.

It might be noted that Hater and Bass (1988) attempted to reduce some of

these types of rating biases. In their study, business leaders were rated by subordinates on the MLQ-5. Then the factor scores on Charisma and the other factors were correlated with satisfaction and effectiveness ratings obtained by the superior of the leaders being rated. Thus, MLQ-5 ratings and effectiveness/satisfaction ratings did not come from the same person, and hence, were less likely to have been biased. Hater and Bass (1988) found that correlations between factor scores and independently obtained effectiveness/satisfaction scores were significantly positive.

When the factor analysis of this study was compared with two previous factor analyses, judgmental criteria were used in comparing factor loadings. The use of statistical criteria was beyond the scope of this study. However, techniques from linear structural equation modeling, specifically confirmatory factor analysis (Long, 1983), could be used for formal hypothesis testing to compare factor analyses from different groups of subjects.

Future Studies

This study has shown that the transformational and transactional model proposed by Bass in 1985 can be corroborated with subjects different from those used in earlier studies. These results should be noted by others interested in Bass' model and should stimulate future research upon the model and discussion of its efficacy. As of now there has been limited educational research related to the Bass theory. One of the few examples was reported by Murray and Feitler (1989) which involved using the MLQ-5 in a study of the leadership at small colleges.

It would seem that much more could be done with the Bass Multifactor Leadership Questionnaire. For example, many studies in effective schools research have included measurements of the behavior of the school principal.

Would the factors measured by the Bass instrument be correlated with valued school outputs like academic achievement and positive school climate?

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